

CLAIMS

I claim:

1. For use in a lighting system for clothing having at least one light source providing illumination to be visible at an external surface of said clothing comprising:

a power source capable of supplying sufficient power to said light source to cause it to provide illumination;

an electrical circuit connected to said light source and said power source;

a switch connected to said power source responsive to movement of said switch comprising:

a housing and means closing the ends of said housing;

a pair of electrical contacts extending into the interior of said housing; and

a member of electrical conducting material freely movable within said housing spaced from said contacts and of length at least sufficient to span the distance between said contacts whereby movement of said switch causes said member to bridge said contacts sending an electrical signal to said circuit and causing said light source to be illuminated.

2. A lighting system as claimed in claim 1 wherein said housing is generally tubular.

3. A lighting system as claimed in claim 1 wherein said housing is angular in cross section.

4. A lighting system as claimed in claim 1 wherein said electrical circuit is connected to said switch and to said power source, said electrical circuit being responsive to initiation of each said electrical signal to limit the time duration of illumination of said light source.

5. A lighting system as claimed in claim 2 wherein said contacts are pins which are spaced longitudinally along said housing.

6. A lighting system as claimed in claim 5 wherein the side walls of said pins are insulated.

7. A lighting system as claimed in claim 2 wherein said housing includes end members and said conductive member is a bar of such length that said bar spans said contacts even if one end of said bar contacts one of said end members.

8. A lighting system as claimed in claim 1 wherein said clothing constitutes shoes.

9. A lighting system as claimed in claim 1 wherein said electrical contacts are clips.

10. A lighting system as claimed in claim 1 wherein said housing is of insulating material.

11. In a lighting system for wearing apparel having at least one light source located to be visible on an external surface of said clothing,

an electrical circuit connected to said light source and a power source connected to said electrical circuit capable of supplying sufficient power to illuminate said light source; and

a switch connected in said electrical circuit responsive to movement of said switch to produce an input signal to said electrical circuit, said switch comprising:

an elongated, generally tubular housing of electrical insulating material, a pair of spaced electrical contact pins extending through the sidewall and into the interior of said housing; and

a bar of electrical conducting material freely movable in said housing and of length at least sufficient to span the distance between said contact pins such that movement of said switch causes said bar to move to bridge said contact pins and produce said input signal.

12. A lighting system as claimed in claim 11 wherein said electrical circuit is responsive to initiation of each said input signal to limit the time duration of illumination of said light source.

13. A lighting system as claimed in claim 11 wherein said tubular housing is generally cylindrical.

14. A lighting system as claimed in claim 11 wherein said tubular housing is rectangular in cross section.

15. For use in a lighting system for clothing having at least one light source providing illumination to be visible at an external surface of said clothing,

a power source capable of supplying sufficient power to said light source to cause it to provide illumination;

a switch connected to said power source responsive to movement of said switch comprising a tubular housing and end members closing the ends of said housing;

a pair of electrical contacts extending into the interior of said housing and to the exterior of said housing; and

a bar of electrical conducting material located within said housing spaced from said contacts and of length at least sufficient to span the distance between said contacts even if one end of said bar is in contact with one of said end members, whereby movement of said switch causes said bar to bridge said contacts sending an electrical signal to said circuit and causing said light source to be illuminated.

16. A lighting system as claimed in claim 15 wherein said end members are molded and part of said housing.

17. A lighting system as claimed in claim 15 further comprising a timing circuit connected between said switch and said light source for limiting the time during which said light source is illuminated following a single closure of said switch.

18. A lighting system as claimed in claim 15 wherein said clothing comprises shoes.

19. A lighting system as claimed in claim 15 wherein said contacts are pins.

20. A lighting system as claimed in claim 19 wherein sides of said pins are insulated.

21. A lighting system for shoes having at least one light source located to provide illumination visible on an external surface of said shoes including a source of electrical power connected to said light source at least sufficient to cause said light source to be illuminated;

a switch connected to said light source and to said power source comprising a tubular housing of electrical insulating material; and

a pair of spaced electrical contacts extending from the interior to the exterior of said housing and a freely movable bar of electrical conducting material located within said housing and of length at least sufficient to span the distance between the interior portions of said contacts.

22. A lighting system as claimed in claim 21 wherein said housing and said contacts are configured such that said bar may rest against said contacts when said switch is at rest; and

a circuit is connected between said power source and said light source for limiting the duration of the illumination of said light source following each closure of said switch.

23. A lighting system as claimed in claim 22 wherein said contacts are clips.

24. A lighting system as claimed in claim 22 wherein said tubular housing is of insulating material.

25. In a lighting system for clothing having at least one light source located to provide illumination visible on an external surface of said clothing including a source of electrical power connected to said light source at least sufficient to cause said light source to be illuminated;

a switch connected to said light source and to said power source comprising a housing of electrical insulating material;

a pair of spaced electrical contacts extending from the interior to the exterior of said housing and a freely movable member of electrical conducting material located within the housing such that said member may rest against said contacts when said switch is at rest and can move first away and then against said contacts to close said switch; and

a circuit connected between said power source and said light source for limiting the duration of the illumination of said light source following each closure of said switch.

26. A movement responsive switch in lighted garments, footwear, backpacks, and other accessories comprising an insulating housing:

two spaced electrical contacts within said housing;

electrical conductors outside of said housing electrically connected to respective ones of said two electrical contacts; and

an unrestrained conductive member freely movable within said housing dimensioned to allow simultaneous contact with said two electrical contacts to provide a movement responsive switch closure.

27. A movement responsive switch as claimed in claim 26 wherein said housing is generally tubular and said unrestrained conductive member is a bar of such length that it can make simultaneous contact with said two spaced electrical contacts.

28. A lighting system as claimed in claim 27 wherein said contacts are pins which are spaced longitudinally along said housing.